

Applicants : Kenneth Schofield et al.
For : VEHICLE HEADLIGHT CONTROL USING IMAGING SENSOR
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Imaging sensor module 14 includes an optical device 36, such as a lens, an array 38 of photon-accumulating light sensors, and a spectral separation device for separating light from the scene forward of vehicle 10 into a plurality of spectral bands, such as a filter array 40 disposed between optical device 36 and light-sensing array 38. Light-sensing array 38 is described in detail in co-pending application Serial No. 08/023,918 filed February 26, 1993, by Kenneth Schofield and Mark Larson for an AUTOMATIC REARVIEW MIRROR SYSTEM USING A PHOTSENSOR ARRAY, now U.S. Pat. No. 5,550,677, the disclosure of which is hereby incorporated herein by reference. Light-sensing array 36 includes a plurality of photosensor elements 42 arranged in a matrix of columns and rows (Fig. 4). In the illustrated embodiment, an array of 512 rows and 512 columns of light-sensing pixels, each made up of a photosensor element 42 is utilized. However, a greater or lesser number of photosensor elements may be utilized and may be arranged in matrix that is laid out in other than columns and rows. Each photosensor element 42 is connected to a common word-line 44. To access the photosensor array, a vertical shift register 46 generates word-line signals to each word-line 44 to enable each row of photosensor elements 42. Each column of photosensor elements is also connected to a bit-line 48 which is connected to an amplifier 50. As each word-line 44 is accessed, a horizontal shift register 52 uses a line 54 to output the bit-line signals on consecutive bit lines 48 to an output line 56. In this manner, each photosensor element 42 may be individually accessed by appropriate manipulation of shift registers 46 and 52. Output 56 is supplied to a digital signal processor 13 which is supplied on an output 62 as input to control circuit 13 (Figs. 3-5).

Please replace the paragraph beginning on page 9, line 8, with the following rewritten paragraph:

In a similar fashion, processing of a headlight frame begins at 109 by setting the exposure period for the imaging sensor module to grab the next frame as a red taillight detecting frame. This is accomplished by setting the exposure period of the imaging sensor module to 0.004 seconds. It is then determined at 120 for each pixel whether an adjacent set